

# BNDES Investment Outlook 2019

July 2019

## 2019-2022 Investment Outlook

### Introduction

The BNDES Investment Outlook 2019 surveys the investment plans in 19 economic sectors from 2019 to 2022. This survey, conducted since 2006, includes investments supported and not supported by the Bank, based on the identification of projects by BNDES's sectoral managements. For the first time, we present an English version that includes historic data.

The current survey covers 11 industry and 8 infrastructure sectors. They account for about 83% and virtually 100% of industry and infrastructure investments, respectively.<sup>1</sup> The investment outlook was compared to 2018 survey, at constant prices for the first quarter of 2019. In this issue, we highlight the determining factors of the projects surveyed. We also present the accuracy of previous surveys. At the end, we take stock of the determining factors for the acceleration of investments in the economy.

### Investments surveyed for the next years exceed US\$ 280 billion

The surveyed investments in the industry and infrastructure sectors for the period 2019-2022 reached US\$ 287 billion, at Q1 2019 prices<sup>2</sup> (Table 1). Comparing with July last year survey for the 2018-2021 period, there was a real growth of 2.7% in total investments, from US\$ 280 billion to US\$ 287 billion.<sup>3</sup>

**Table 1: Investment outlook: 2019-2022**  
(US\$ billion, 2019 prices)

Sectors	2018	Previous survey		Current survey	
		2018 to 2021		2019 to 2022	
		Total	Annual avg.	Total	Annual avg.
Industry	32.2	145.1	36.3	155.1	38.8
Infrastructure	34.4	134.5	33.6	131.9	33.0
<b>Total</b>	<b>66.5</b>	<b>279.6</b>	<b>69.9</b>	<b>287.1</b>	<b>71.8</b>

Source: BNDES.

\* Exchange rate: R\$/US\$ 3.77.

Investments in the surveyed sectors, which totaled US\$ 66.5 billion in 2018, should increase to an annual average of US\$ 71.8 billion between 2019 and 2022. Due to the acceleration in investments by the end of the period, the perspective is of a real growth of 3.9% per year (p.y.) on average.<sup>4</sup> This reveals an improvement in expectations compared to the 2017 and 2018 surveys, which foresaw a negative growth of 3.1% p.y. and a real growth of 1.9% p.y. on average for the 2017-2020 and 2018-2021 periods, respectively.

The projections are of growth in industry. In infrastructure, the comparison between the value in 2018 and the average from 2019 to 2022 shows a scenario of slight decrease in investments, but with acceleration in 2021 and 2022, suggesting that the value in 2022 will be above that registered in 2018. The difference between the behaviors of the industry and infrastructure is mainly explained by the disparate perspectives of the largest sectors in each group (Table 2).<sup>5</sup>

In industry, the scenario of strong expansion of investments is explained, to a large extent, by the performance of oil and gas, driven by the recovery in oil prices and the auctioning or sharing of exploratory blocks in 2017 and early 2018.

<sup>1</sup> The industry's share results from comparing investments between 2012 and 2016 of the sectors analyzed with those of the Brazilian industry according to the Annual Industrial Survey (PIA) of the Brazilian Institute of Geography and Statistics (IBGE).

<sup>2</sup> Update based on changes in the implied deflator of the gross fixed capital formation (GFCF) up to 2016, and on the cumulative change in the Broad National Consumer Price Index (IPCA) up to the date of the investment outlook survey.

<sup>3</sup> Investments on beverages in the previous survey were not considered as they were not analyzed in the current survey. The cumulative inflation of 3.5% between the two surveys was discounted.

<sup>4</sup> Calculated by geometric average considering evolution 2022 in comparison with 2018.

<sup>5</sup> A table with sector investments data from 2012 to 2018, at current US\$ prices, can be found in Appendix.

Table 2: Investment outlook, per sector (US\$ billion, 2019 prices)

	2012	2013	2014	2015	2016	2017	2018	2019 to 2022	
								Total	Annual avg.
Metal mining	8.9	9.0	7.6	8.4	5.5	3.8	3.7	18.0	4.5
Oil & Gas	28.8	34.2	26.8	22.6	15.8	16.1	15.9	81.7	20.4
Food	4.1	3.9	3.7	3.1	2.6	2.5	2.0	9.0	2.3
Pulp and paper	3.1	2.2	2.8	2.4	2.6	2.2	2.3	9.8	2.4
Ethanol	2.5	3.2	2.2	1.1	0.8	0.7	0.7	3.0	0.8
Chemical products	1.3	1.6	1.3	0.9	0.7	0.7	1.0	4.5	1.1
Steel industry	2.3	1.6	1.8	1.3	1.2	0.6	0.8	4.6	1.1
Electronics	1.8	1.9	1.7	1.4	1.2	1.1	1.2	5.8	1.5
Health industrial complex	1.1	1.2	1.4	1.4	1.3	1.3	1.4	5.8	1.5
Motor vehicles*	7.5	7.1	6.3	5.5	4.2	3.5	2.8	10.5	2.6
Air and spacecraft	0.7	0.8	0.6	0.7	0.7	0.7	0.4	2.4	0.6
<b>Industry</b>	<b>61.9</b>	<b>66.7</b>	<b>56.3</b>	<b>48.9</b>	<b>36.6</b>	<b>33.4</b>	<b>32.2</b>	<b>155.1</b>	<b>38.8</b>
Electricity	19.6	16.2	15.0	14.7	16.2	17.0	13.1	41.7	10.4
Telecommunications	9.4	10.9	10.6	9.1	8.3	8.1	8.4	33.3	8.3
Logistics	13.1	16.4	16.2	15.9	11.9	9.8	9.5	42.2	10.5
• Roads	7.1	8.6	7.8	5.6	6.4	5.9	5.2	25.7	6.4
• Rail	2.2	2.5	2.6	2.6	2.3	2.2	2.1	7.4	1.9
• Ports	2.0	0.9	1.9	2.0	0.7	0.4	0.6	3.8	1.0
• Airports	0.9	2.4	1.3	1.0	0.7	0.4	0.6	2.3	0.6
• Urban mobility	1.0	2.0	2.7	4.7	1.8	0.9	0.9	3.0	0.7
Sanitation	3.5	3.5	3.9	3.6	3.3	3.0	3.3	14.7	3.7
<b>Infrastructure</b>	<b>45.6</b>	<b>46.9</b>	<b>45.8</b>	<b>43.3</b>	<b>39.7</b>	<b>37.9</b>	<b>34.4</b>	<b>131.9</b>	<b>33.0</b>
<b>Total</b>	<b>107.5</b>	<b>113.6</b>	<b>102.0</b>	<b>92.2</b>	<b>76.3</b>	<b>71.3</b>	<b>66.5</b>	<b>287.1</b>	<b>71.8</b>

Source: BNDES

Note: The following sectors do not consider depreciation or consider partial replacement only: aerospace, electricity, railways, ports, mobility and sanitation.

In infrastructure, the scenario is of retraction in electricity investments until 2021, resuming from 2022 (see sectoral highlights). In contrast, the perspective is of a significant increase in investments in logistics and sanitation. The performances of these two sectors show a recovery in investments in the most development-deprived areas, especially from 2020 onward.

Brazilian logistics do indeed face difficulties that range from modernization and increase in the supply of infrastructure to the integration between means of transportation and the adoption of international best practices. In railways, the supply is basically dedicated to the transportation of solid bulk, especially iron ore, accounting for 95% of the volume of cargo transported. There are growing prospects for the insertion of railroads in the transportation of agricultural bulk exports (Ferrovia Norte-Sul and increase in the capacity of Malha Norte towards the Port of Santos), but challenges still persist in the rail transportation of general cargo, the main Brazilian demand. In sanitation, the fact that more than half of the sewage generated in the country (54%) is not treated is worth noting (2017 data, Snis).<sup>6</sup>

## Sectoral highlights

Next, we analyze investment outlooks, their determinants, and some of the main projects in the 19 sectors included in this survey.

### Metal Mining

The scenario of higher investments reflects a set of factors, such as: (i) the recovery of the international prices of metallic commodities; (ii) the end of the deleveraging process in the sector, overcoming the high debt and cash constraint scenario observed in recent years; and (iii) the improvement in the regulatory environment for new investments, following the approval of interim measures and the publication of the mining code's new regulation in June 2018. The tragic collapse of the Brumadinho dam in January 2019, in turn, is leading to an increase in investments in dams.

Investments in capacity expansion include those in the production of materials demanded by electric vehicles and new materials related to industry 4.0, such as copper, nickel, lithium, vanadium, silicon and rare earths metals. These are the cases, for example, of zinc (Nexa's Aripuanã project); lithium (Sigma in the Jequitinhonha Valley); and vanadium, which is already being operated by Vanádio Maracás.

<sup>6</sup> *Diagnosis of Water and Sewage Services – 2017*, by National Sanitation Information System (Snis), (Brasília, Feb. 2019).

## Oil and Gas

With the recovery in oil prices, the level of activity in the sector is starting to resume more consistently than in recent years. In 2017 and early 2018, exploratory blocks were auctioned or shared with several companies showing great interest in investing in Brazil. As oil exploration and production projects are long-term, most of the investments resulting from these auctions will occur after 2021. For 2022, there is expectation of acceleration in the investments.

## Food

Food is one of the most dynamic Brazilian industry sectors. In 2018, its revenue grew by 2.1%. There was a slight improvement in economic activity in 2018, with growth in domestic retail and out-of-home food sales. For 2019, the expectation is for investments in the sector to increase by 3.1%, with a scenario of growth above 4% in the three following years.

## Pulp and Paper

Brazil remains the world's largest producer of market short-fiber pulp (approximately 40% of the total). Its demand has been growing by 4.5% p.y., due to the replacement of long-fiber by short-fiber pulp, and to the increase in the demand for sanitary papers. In 2018, there was a rise in prices in the sector, which is favoring the resumption of investments in new plants in the country. One of the reasons for the rise in prices was China's suspension of the production of paper from recycled materials, leading to the increase in pulp imports.

For the coming years, it is expected the implementation of large-scale pulp (mainly) and paper projects by Suzano, Duratex and Klabin, which together represent around US\$ 5 billion investments. This amount should keep sector investments at high levels. The investment outlook also considers a sustaining capex (in maintenance of the activity) in paper, pulp and wood panels of around US\$ 750 million p.y.

## Ethanol

The maintenance of the policy of aligning gasoline prices with international prices resulted in the consolidation of a scenario that is more favorable to ethanol. In addition, differentiated tax policies that

favor the product (Cide, PIS/Cofins and ICMS), as well as the gradual implementation of RenovaBio (renewable fuel incentive program that foresees the creation of the Biofuel Decarbonization Credit — CBio), will impact the demand on biofuels. Another factor that favors the sector is the introduction of better sugarcane species, as well as the renewal/optimization of sugarcane fields, which should increase profit margins. The resumption of investments in the coming years tends to happen gradually, in response to the improvement in economic conditions. The implementation of RenovaBio in 2020 should accelerate investments, in particular from 2021 onward.

## Chemical Products

There was a 14% real growth in investment prospects in relation to the previous survey. The increase in investments in sustaining capex of Braskem and Unipar Carbocloro plants stands out. The current investment outlook also includes a large Brazil Potash project, of around US\$ 1 billion between 2020 and 2022, which still depends on environmental licensing for its implementation in the Amazon region.

## Steel Industry

For the steel industry, 2018 represented the growth of protectionism in international trade. The edition of Section 232 by the United States of America (USA), with the application of additional tariffs on imports of various steel and aluminum products, also led to the implementation of protectionist measures by the European Union, resulting in the reduction in the volume of Brazilian steel exports last year. In contrast, international prices of steel products remained similar to those of the end of 2017, a year marked by the recovery of prices in the sector.

With this price level abroad, coupled with the observed exchange rate depreciation, the sector profit margins in Brazil recovered in 2018. Thus, the steel industry, which was investing less than what would be required to maintain its installed capacity, began to rebalance its investments in sustaining capex. For 2019, investments are expected to return to the level required for the maintenance and modernization of the installed capacity. From 2020 onward, depending on the Brazilian economic growth, the expectation is of return of investments in addition to capacity.

## Electronic Complex

Since 2017, the sector has been showing signs of improvement, maintaining the historic pattern of growing above the performance of the gross domestic product (GDP). In 2018, investments in the segments of IT equipment and electronic utilities drove the performance of the electronic complex. Information Technology (IT) and software production services also stood out, with double-digit growth. Prospects remain positive for the 2019-2022 period. In the public policy agenda for the sector, the National Plan for the Internet of Things, recently launched by the Federal Government, stands out.

## Health industrial complex

Health industries are expected to have an investment cycle with moderate growth between 2019 and 2022. The signs perceived for the sector, however, are ambiguous. On the one hand, there are reports of postponements of more complex investments, mainly due to uncertainties in the public procurement scenario, as well as news of closure of Brazilian production units of multinational laboratories (Eli Lilly and Roche), associated with the current global strategy of these groups to concentrate production. On the other hand, according to April data from the Getulio Vargas Foundation's Brazilian Institute of Economics (Ibre/FGV),<sup>7</sup> the pharmaceutical sector is one of the few (next to the pulp and paper sector) operating at a capacity occupation level (81.8%) that is higher than the historic level (76.9%), indicating the possibility of investments in expansion of installed capacity.

## Motor Vehicle

Despite the downsize scenario, sector investments continue at a high level, with an annual average of US\$ 2.7 billion. This is because companies invest heavily in new models (or product upgrades) to maintain and/or gain market share, even when demand is slow. In the trucks and buses segment, the change in the regulation of carbon dioxide emissions requires investments.

## Air and Spacecraft

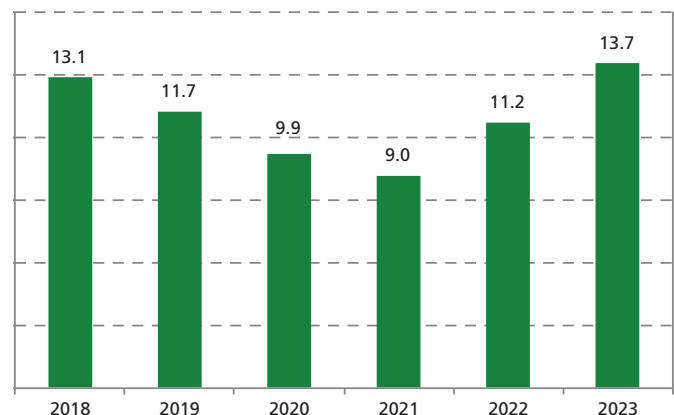
The investment outlook of around US\$ 2.4 billion, between 2019 and 2022, is expected to change due to the recent Boeing-Embraer joint venture, which is being

consolidated. Up until last year, Embraer accounted for more than 80% of the projections made for the sector. With the joint venture, two new companies are being created: JV Commercial Boeing-Embraer (Boeing Brasil Commercial), focused on commercial jets production; and Nova Embraer S.A., focused on the defense & security, and also executive jet segments.

## Electricity

The prospect of falling investments in the sector is due to the interregnum of new energy auctions (between April 2016 and December 2017) and the three to four-year interval between the dates of the energy auctions and associated investments. The resumption of these auctions from 2018 on will impact investments more significantly only from 2022 on and, above all, from 2023 on. In this sense, Graph 1 shows a "hired recovery" of investments in the last two years, making them rise above the 2018 level, in real terms, only in 2023 (outside the scope of this survey).

Graph 1: Outlook of electricity investments (US\$ billion, Q1 2019 prices)



Source: BNDES.  
Note: Do not consider depreciation.

## Telecommunications

The sector still faces challenges, such as the discussions around House Bill (PLC) 79/2016, which changes the General Telecommunications Law regarding the provision of private landline services, replacing the current model of concession, and the definition of the so-called "reversible assets" of concessionaires to be reverted to the Federal Government at the end of the concession. Addressing these themes is essential for the resumption of the sector investments. The debate on the use of

<sup>7</sup> Available at <https://portalibre.fgv.br>.

the Telecommunications Services Universalization Fund (Fust) has intensified, based on the work of the National Telecommunications Agency (Anatel), with BNDES's participation. The discussion involves using this fund for long-term credit and for setting up a guarantee fund, focusing on regions deprived of this service, defined in the General Plan of Competition Goals (PGMC), and the goals of the Structural Plan of Telecommunication Networks (Pert).

The US\$ 33.3 billion investments forecast in the sector includes those made by small service providers, which already account for about 20% of the landline broadband market and accounted for approximately US\$ 400 million investments in 2018. The projects include the expansion of optic fiber networks, especially fiber-to-the-home (FTTH) ones, and the resumption of the expansion of 4G/4.5G networks. Regarding the new technology for 5G mobility, Anatel expressed interest in auctioning frequencies in 2020. However, there is still no visibility regarding the value of investments in new networks.

## Logistics

### • Roads<sup>8</sup>

A point that draws attention in this survey is the existence of a virtually continuous flow of scheduled concession auctions for the coming years. Considering the federal and the state of São Paulo agendas only, 11,500 km in highway projects are expected from 2019 to 2021, with a total estimated investment of US\$ 27 billion, part of which will be made after 2022. In addition, there is a chance of new projects, either concessions or public-private partnerships, which are being evaluated by other states such as Minas Gerais, Rio Grande do Sul, Goiás and Mato Grosso do Sul.

### • Rail

The prospect of decline in the sector's investments is mainly due to: (i) the actual retraction in public investments in the expansion of the infrastructure to be further conceded to the private sector; and

**Table 3: Roads concession portfolio – Federal and State of São Paulo (2019-2021)**

Unit	Forecast	Concession	Rebid?
Federal	2019	BR-364/365/MG/GO	
		BR-101/SC	
	2020	BR-381/262 MG/ES	
		BR-163/230 MT/PA	
		BR-153/080/414/GO/TO	X
	2021	BR-040/495/MG/RJ	X
		BR-116/465/101/SP/RJ	X
		BR-116/493/RJ/MG	X
		BR-470/282/153/SC	
		Rodovias Integradas do Paraná – 153/158/163/272/277/369/373/376/476/PR	X
State of SP	2019	Piracicaba-Panorama	X
	2020	Triângulo do Sol	X
	2021	Renovias	X
		ViaOeste	X

Source: BNDES.

(ii) the fall in investments made by the current concessionaires, due to the closer expiration of the concession contracts. Among the planned investments, we highlight those related to the concession of the southern section of Ferrovia Norte-Sul and Ferroanel/SP. Other highlights include the prospect of investments to increase the scale of the operations of those concessionaires with greatest potential for early renewals of their concessions.

### • Ports

From the perspective of an annual average investment of about US\$ 1 billion in ports, the two main highlights are: (i) investments by current operators, around US\$ 580 million p.y.; and (ii) investments listed in the Partnership and Investment Program (PPI) of US\$ 400 million, between 2019 and 2021, related to new leases and extension of contracts with liability matching.

### • Airports

Investments in the sector, although still relevant, have been decreasing since 2013, as the largest airports, already conceded to private sector, complete their expansion plans and acquire a

<sup>8</sup> The investments made in 2018 and those projected for 2019-2022 include state investments in highways, which were not considered in previous surveys. This was made possible by separating the highway and urban mobility segments from state investments in transportation. These values were also corrected in the historic series, which is included in the Appendix.



capacity that exceeds demand. The period from 2019 to 2022 is greatly influenced by the airports conceded in 2017 — Florianópolis, Porto Alegre, Salvador and Fortaleza — which reach the peak of investments in adequacy in 2019 and 2020. The three airport lots (Northeast, Midwest and Southeast), conceded in blocks in March 2019, and which should carry out the main works around 2021, also stand out. By the end of the period, there are expectations of new concessions that, in practice, tend to partially replace the reduction in investments in the airports conceded.

#### • Urban Mobility

The outlook of reduction in investments stems from the still heavy reliance on public sector investments. This dependence occurs even in public-private partnerships (PPP), since they require a share of public investment. According to the sector's regulatory framework, municipalities are responsible for intra-municipal mobility, and states, for inter-municipal mobility. However, larger projects, such as metro ones, are often taken over by the states. Due to the

recent election and changes in state governments, it is difficult to project the public sector investments and which projects will be prioritized, with the changes in management and teams.

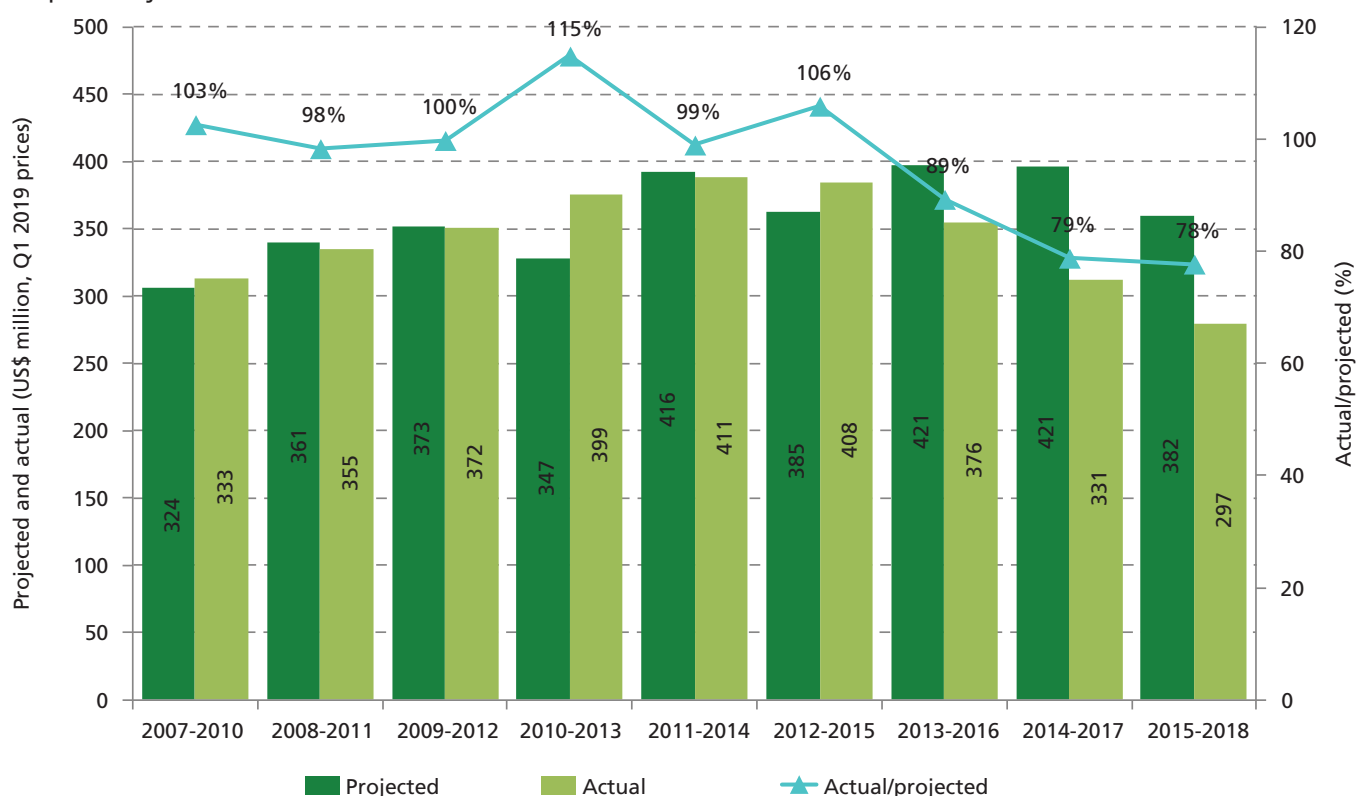
#### Sanitation

Although the perspective is of growing investments in the sector from 2019 to 2022, the projected values are still very low in view of the challenge of the universalization of sanitation. There is some increase in the share of private capital, but its size still tends to be small compared to the public sector. The highlight is the disbursement of resources to the Avançar Cidades Program, which now features a continuous process of submission of proposals.

#### Comparing projected with actual investments

To estimate the investment outlook's accuracy, projections were made at values of Q1 2019. The sectors surveyed vary in-between surveys. In this sense, changes in values in-between periods do not represent changes in investments' performance. Graph 2 shows the relationship between expected

Graph 2: Projected/actual rates



Source: BNDES.

Note: As the sectors vary in-between surveys, the data in this graph are not compatible with the values of investments made between 2012 and 2018, presented in tables 1 and 2.

and actual investments in surveys for which we have the tracking record (or preliminary estimate) of the amounts invested by each sector. Values above 100% indicate underestimation (actual values higher than those estimated) — and values below 100% show that reality was worse than expected.

In three of the nine surveys, the invested values were above projections. In one of them, for the 2009 to 2012 period, the values practically coincide, with a difference of only US\$ 1 million. The greatest errors happened in the two most recent surveys, of 2014-2017 and 2015-2018. In both cases, the errors are explained by the sudden change in the economy's performance, with negative growth accumulated in the GFCF of 29% and 23%, respectively, in these periods.

## Conclusions

According to the survey, investments in the sectors under analysis are expected to experience a real growth of 3.9% p.y., on average, over the period from 2019 to 2022, driven by an acceleration of growth towards the end of the period. This performance is above the results of current financial market projections (according to *Focus* data)<sup>9</sup> for GDP, and shows a significant improvement in expectations compared to previous surveys.

The scenario projected for this and the next year is of resumption of more modest investments, mainly due to the belated impact on investments resulting from the auctioning of the oil exploration and energy concession blocks. Both in oil and gas and in electricity, the prospects are of a strong acceleration of investments by the end of the period analyzed, with stronger impacts on the Brazilian economy.

The scenario of investments is, however, quite disparate across sectors. In eight of the 19 analyzed, the perspective is of significant growth in investments, above 5% p.y., in the period from 2019 to 2022.<sup>10</sup> In contrast, in six other sectors, the scenario is of decline in investments, ranging from 0% to 5% in the remaining five sectors. The oil and gas sector, both for its relevance in investments and due to the projected growth rates, plays a major role in improving expectations, promoting the industry's performance.

The economic activities analyses reveal other important determinants. In recent years, one of the main reasons for the retraction of investments has been the process of deleveraging of companies. The current survey is the first to show the potential termination of this process, with companies leaving this high debt and cash constraint scenario behind. This behavior was highlighted in mining. Another highlight was the steel industry, with the improvement in the sector's profit margins.

The text also highlights the influence of public policies, changes in regulations and infrastructure concession programs on the determination of investments. Some of the initiatives with high potential impact on sectors are: the mining code's new regulation; RenovaBio, in the ethanol sector; the Avançar Cidades Program, in urban mobility; and concession rounds, especially in roads.

There are items on the public policy agenda that require attention, such as the developments of the National Plan for the Internet of Things and PLC 79/2016 in telecommunications. The states' fiscal situation and the uncertainties pertaining to the design of public policies appear as factors that inhibit investments, especially in urban mobility, sanitation and the health industrial complex.

<sup>9</sup> Available at: <https://www.bcb.gov.br/>.

<sup>10</sup> The eight sectors with investment growth above 8% are: (i) mining; (ii) oil and gas; (iii) chemistry; (iv) steel industry; (v) electronic complex; (vi) aerospace; (vii) roads; and (viii) ports. The six with negative growth are: (i) automotive; (ii) electricity; (iii) telecommunications; (iv) railroads; (v) airports; and (vi) urban mobility. The five ranging from 0% to 5% are: (i) food; (ii) pulp and paper; (iii) ethanol; (iv) health industrial complex; and (v) sanitation.

Appendix — Table A1: Historic data of investments (US\$ billion, current prices)

	2012	2013	2014	2015	2016	2017	2018
Metal mining	12.5	12.1	10.1	8.5	5.5	4.3	3.8
Oil & Gas	40.4	46.0	35.5	22.9	15.9	18.1	16.2
Food	5.7	5.3	5.0	3.2	2.6	2.8	2.1
Pulp and paper	4.4	2.9	3.7	2.4	2.6	2.4	2.3
Ethanol	3.5	4.3	2.9	1.2	0.8	0.8	0.7
Chemical products	1.8	2.2	1.8	0.9	0.7	0.8	1.0
Steel industry	3.2	2.1	2.4	1.3	1.2	0.7	0.8
Electronics	2.5	2.5	2.2	1.4	1.2	1.3	1.3
Health industrial complex	1.6	1.6	1.9	1.4	1.3	1.6	1.4
Motor vehicles*	10.5	9.6	8.4	5.6	4.2	4.0	2.9
Air and spacecraft	1.0	1.1	0.8	0.7	0.7	0.8	0.4
<b>Industry</b>	<b>87.1</b>	<b>89.7</b>	<b>74.6</b>	<b>49.6</b>	<b>36.7</b>	<b>37.7</b>	<b>32.9</b>
Electricity	27.6	21.8	20.0	14.9	16.2	19.1	13.4
Telecommunications	13.2	14.6	14.1	9.2	8.3	9.1	8.6
Logistics	18.4	22.0	21.5	16.1	12.0	11.1	9.7
• Roads	9.9	11.6	10.4	5.7	6.4	6.7	5.4
• Rail	3.1	3.4	3.4	2.7	2.3	2.5	2.2
• Ports	2.8	1.2	2.5	2.1	0.7	0.4	0.7
• Airports	1.3	3.3	1.7	1.0	0.7	0.5	0.6
• Urban mobility	1.3	2.7	3.5	4.8	1.9	1.0	0.9
Sanitation	5.0	4.7	5.2	3.7	3.3	3.4	3.4
<b>Infrastructure</b>	<b>64.1</b>	<b>63.1</b>	<b>60.7</b>	<b>43.9</b>	<b>39.8</b>	<b>42.8</b>	<b>35.1</b>
<b>Total</b>	<b>151.2</b>	<b>152.8</b>	<b>135.3</b>	<b>93.5</b>	<b>76.4</b>	<b>80.5</b>	<b>68.0</b>

Source: BNDES.

Note: The following sectors do not consider depreciation or consider partial replacement only: aerospace, electricity, railways, ports, mobility and sanitation.

## Economic Activities Committee' composition

**Coordination:** Fernando Pimentel Puga – GP; Lavínia Barros de Castro – AP/DEPLAN

**Air and spacecraft:** Sérgio Varella; João Alfredo Barcellos; Nelson Tucci – AI2/DEBK

**Airports:** Clarissa Taquette Vaz Albuquerque; Thiago Damasceno – AST/DEMOB

**Electricity:** Alexandre Siciliano Esposito – AE/DEENE1

**Electronics and Telecommunications:** Carlos Eduardo Azen Alves; Rodrigo Madeira – AI1/DETIC

**Ethanol:** Artur Yabe Milanez; Guilherme Maia – AI1/DEAGRO

**Food:** Artur Yabe Milanez; Guilherme Maia – AI1/DEAGRO

**Health-Industrial Health Complex:** Carla Reis de Souza Neto, Beatriz Meirelles, Adriana Inhudes – AI1/DECISS

**Metal Mining; Steel Industry; Pulp and Paper; Chemical**

**Products:** Pedro Paulo Dias Mesquita, Guilherme Costa Pereira, Rodrigo José Mendes, André Camargo Cruz, Eduardo Ermakoff – AI2/DEBASE

**Motor Vehicles:** Luiz Daniel Willcox de Souza; Thiago Miguez, Gabriel Daudt – AI2/DEBK

**Oil and Gas:** André Pompeo do Amaral Mendes – AE/DEGAP

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